

AMENDMENTS TO THE SPECIFICATION:

If entered, the following listings of amendments in phrases, sections, and paragraphs of the specification will replace all prior versions and listings of said phrases, sections, and paragraphs of the specification in the application.

Please replace the related US patent application section on page 1 with the following amended section:

RELATED PATENT APPLICATION

This application is related to US patent application docket number DS03-028, serial number 10/830,157-#####, filed concurrently, and assigned to the same assignee as the present invention. Title: "Low Cost Squib Driver for Airbag Application"

Please replace the phrase beginning on page 2, line 11 with the following amended phrase:

Alongside also necessary as another main component ~~are~~is a deployment circuit having at least one accelerometer as crash sensor, sensitive to vehicle motion, especially deceleration, and containing an electronic control module for determining

when to deploy the airbag and sending a deployment pulse to the igniter, normally using a microprocessor system monitoring the accelerometer output for evaluating the severity of a crash to determine whether to deploy the airbag.

Please replace the second paragraph of page 9, starting in line 7 with the following amended paragraph:

U. S. Patent Application 2002/0050826 (to Boran et al.) shows and explains high and low side driver tests for airbag modules, wherein a method of testing a high-side driver and a low-side driver in an airbag squib circuit includes preliminary testing of squib resistance and squib leakage for a plurality of trials. Next, one of the drivers is turned on while keeping the other one of the drivers off. A current-limited power supply supplies an intermediate voltage to a squib terminal and the voltage at the terminal is continuously compared with a predetermined voltage range that includes the intermediate voltage. The one driver is turned off in response to the voltage at the point being outside the predetermined voltage range, thereby detecting that the one driver is operating properly. If the voltage at the point remains in the predetermined voltage range for a predetermined time period, then the one driver is turned off and an indication is made that the one driver has failed. If the first driver passed, then the other driver is tested in the same manner.

Please replace the second paragraph of page 25 with the following amended paragraph:

Still with the help of FIG. 2 looking now somewhat closer to the diagnostic functions of the circuit of the invention during normal operation, we find that in diagnostic mode for the squib (900), which is controlled by the DOT circuit block (150), the squib (900) is powered by the AVS voltage V_{cpAVS} (750) with a maximum current limited to 50mA. The voltage sensing signals measured are V_1 , V_2 , V_3 , and V_4 fed into the DOT (150) circuit by lines ~~116~~112, 115, 114 and 111, referenced to GND 110. Switching on the switch FET N_3 - P_1 (410) with a limited current from the source I_3 (320), the two voltages V_1 -(~~113~~112) and V_2 (115), and thus the voltage drop V_1/V_2 can be measured. With this a short to GND can be detected. In case of a short the squib (900) cannot be fired because the measurement current is limited and too small for firing the squib (900). Switching on the current mirror FET N_1 (~~425~~420) with a limited current from the source I_4 (330), the voltage drop V_3/V_4 (114/111) can be measured. With this a short to AVS can be detected. In case of a short again the squib (900) cannot be fired because the measurement current is limited and too small for firing the squib (900). Activating the current source FET N_1 (420) and the switch FET P_1 (410), the voltage drop V_2/V_3 (115/114) of the squib and the serial resistance of the squib can be measured. In this case the current I_5 controlling P_1 is limited anyhow to 50 mA, therefore the diagnostic current I_3 can only be smaller or equal to 50mA.